

1 39943/SAH/C715

LONG WAVELENGTH VERTICAL CAVITY SURFACE EMITTING LASER

5 ABSTRACT OF THE DISCLOSURE

10 Selectively oxidized vertical cavity lasers emitting near
1300 nm using InGaAsN quantum wells are reported for the first
time which operate continuous wave below, at and above room
temperature. The lasers employ two n-type $\text{Al}_{0.94}\text{Ga}_{0.06}\text{As}/\text{GaAs}$
distributed Bragg reflectors each with a selectively oxidized
current aperture adjacent to the active region, and the top
output mirror contains a tunnel junction to inject holes into the
active region. Continuous wave single mode lasing is observed
up to 55°C.

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